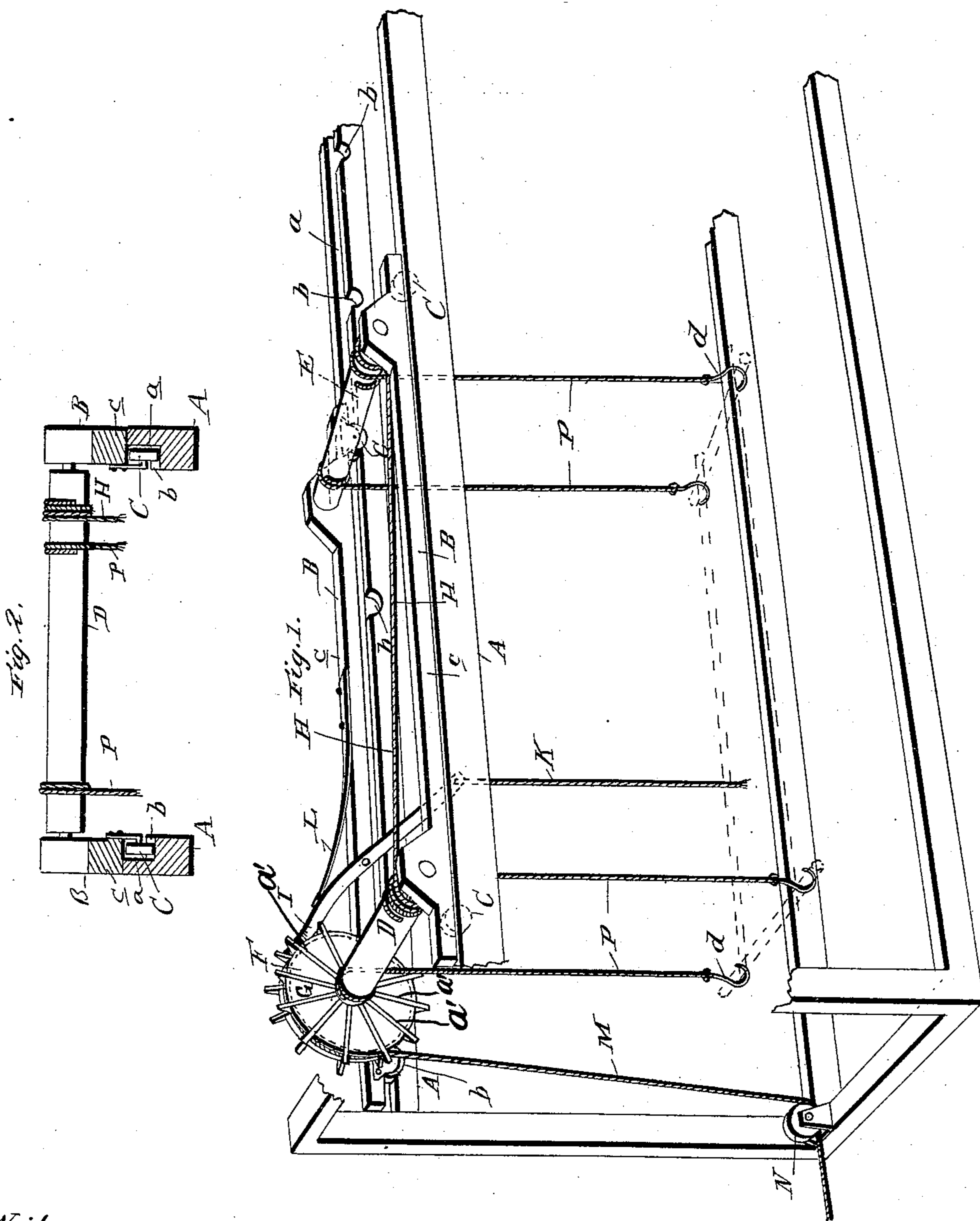


(No Model.)

R. SARGENT.
LOAD LIFTER.

No. 450,089.

Patented Apr. 7, 1891.



Witnesses:
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UNITED STATES PATENT OFFICE.

RICHARD SARGENT, OF MAYFIELD, CANADA, ASSIGNOR OF ONE-HALF TO
ANDREW GIFFIN, OF SAME PLACE.

LOAD-LIFTER.

SPECIFICATION forming part of Letters Patent No. 450,089, dated April 7, 1891.

Application filed January 9, 1891. Serial No. 377,213. (No model.) Patented in Canada September 9, 1890, No. 34,994.

To all whom it may concern:

Be it known that I, RICHARD SARGENT, a citizen of the Dominion of Canada, residing at Mayfield, in the Province of Ontario and Dominion of Canada, have invented certain new and useful Improvements in Load-Lifters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to improvements in apparatus for elevating loads of hay or grain in a barn or other place and delivering the same to any suitable point of destination therein, and the novelty will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, in which—

Figure 1 is a view showing my improved apparatus supported on a track or guide-beams, such as are usually placed in barns in which hay or grain is to be elevated, some of the parts being broken away to better illustrate their connections; and Fig. 2 is a cross-sectional view of the track or supporting-frame and the movable elevating-frame thereon.

Referring by letter to said drawings, A indicates horizontally-supported beams, which are designed to serve as a track or guide for the elevating movable frame, which will be presently described. These beams A have one of their upper longitudinal sides cut away, as shown at *a*, and while the cut-away portion in the present illustration is shown on the inner side of the beams, yet it is obvious that such cut-away portions may be placed on the outer side. These cut-away portions are provided at suitable intervals with notches *b*, designed to receive the rollers of the movable elevating-frame.

B indicates the movable elevating-frame, which is supported on the horizontal track or beams A. This frame is composed of two parallel beams *c*, which are designed to be placed above the track or guide-beams and are provided with rollers C, which are designed to travel in the cut-away portions *a* of the track-beams and also enter the notches *b* therein.

These rollers should be less in diameter than the height of the groove *a* of the beams, but slightly greater in diameter than the combined height of the cut-away portion *a* and the notches *b*, so that when the rollers C have been brought to bear in the notches the under side of the beams *c* may bear upon the upper side of the beams A, while when the movable frame B has been moved or lifted so as to bring the rollers C out of the notches *b* the said frame may be free to travel on the track rails or beams.

D and E indicate two winding-shafts, which are journaled, respectively, in the forward and rear ends of the movable frame and in a transverse position thereon. The winding-shaft D has fixed to it in a vertical position a ratchet-wheel F and winding-drum G, and this shaft D is connected with the shaft E by means of a rope H, so that when said rope is winding thereon it will be unwinding from the shaft E, and consequently said shafts will be rotating in opposite directions.

I indicates a pawl, which is pivoted at a suitable point to one of the horizontal beams of the movable frame, with one end engaging the teeth of the ratchet, and its opposite end has attached to it a pull rope or cord K, whereby said lever or pawl may be disengaged from the teeth of the ratchet by a person standing on the floor of the barn, a flat spring L being employed to normally hold the ratchet and pawl in engagement.

M indicates a lifting-cable. This cable has one end suitably secured to the winding-drum G of the shaft D, and from thence said cable passes downwardly and under a suitable guide-sheave N, journaled in the floor or other suitable point, so that the cable may be carried to the desired position for the attachment of a draft-animal or other suitable power.

P indicates lifting ropes or chains, there being four preferably employed. These ropes or chains P are secured at their upper ends to the winding-shafts D and E, respectively, and their lower ends carry hooks *d* or other suitable means for attachment to the rack or frame of a hay or grain wagon, as better shown in dotted lines.

In operation, when it is desirable to elevate

a load of hay or the like, such load is driven into the barn and beneath the elevating-frame. The hooks *d* are then attached to the rack of the wagon-body or other suitable movable part thereof, after which the team or power is applied to the cable M, when the rope P will be wound upon the shafts D and E, respectively, the power starting by the cable from the drum G to the shaft D, and thence communicated by the rope H to the shaft E, which is turned in an opposite direction, thus winding the rope P and lifting the load. In this position the rollers of the movable frame B are in the grooves *b* and the under sides of the beams *c* are firmly bearing upon the upper sides of the beams A, so that the frame may be steadied. As the load has been elevated to the desired altitude by lifting the rollers out of the notches *b*, the movable frame may be slid along to the desired point in the recesses of the track or guide beams.

It will be observed that the drum G has spokes or arms *a'*, extending from its hub or center to a sufficient distance beyond the periphery to form the ratchet-wheel and be engaged by the pawl or lever I, the said arms or spokes also serving as a guard to the rope as it is wound on the drum.

Having described my invention, what I claim is—

1. In a load-elevator, substantially as described, the combination, with the horizontally-supported track or guide beams, each

cut away along its upper side and said cut-away portions having notches, of the movable elevating-frame arranged on said beams and carrying rollers to bear in said notches, the two winding-shafts journaled transversely in the movable frame and rotatable in opposite directions, a ratchet-wheel and winding-drum fixed to one of the shafts, a cable secured at one end to said drum and its opposite end passing under a guide-sheave to a point of draft, lifting-ropes attached at their upper ends to the respective winding-shafts and their lower ends adapted to engage the load to be elevated, a rope connecting said winding-shafts, so that motion received at one will be communicated to the other, and a pivoted pawl adapted to engage the ratchet-wheel and carrying a pull-cord for releasing the same, substantially as specified.

2. The combination, with the horizontally-supported track or guide beams, each cut away along one of its upper sides and having notches in the base of said recesses, of a movable elevating-frame carrying depending rollers adapted to move in said cut-away portions and also into the notches, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

RICHARD SARGENT.

Witnesses:

THOMAS J. BLAIN,
ANDREW GIFFIN.